

REMARKS

This is in response to the Final Office Action mailed on December 10, 2007 in which all of pending claims 1-31 were rejected. With this response, claims 1-31 are presented for reconsideration and allowance in view of the following remarks and arguments.

Interview Summary

On January 30, 2008 a telephone interview between Examiner Lee and John Veldhuis-Kroeze. The teachings of Chang et. al (U.S. Patent No. 5,627,979) relative to the limitations of independent claim 1 were discussed, but no agreement was reached. The Examiner's time in conducting the interview is appreciated.

Claim Rejections -35 U.S.C. § 102

As in the first Office Action, claims 1-31 were rejected under 35 U.S.C. § 102(b) as being anticipated by Chang et al. (5627979), hereafter referred to as "Chang." In rejecting independent claim 1, the Office Action again stated:

Re claim 1, Chang et al. discloses a method of constructing a representation of an object having at least one property, the method comprising:

identifying at least one property group associated with the object which has been chosen to represent the object (employee 1910 group, see figure 19 for example), at least one property of the object belonging to each property group associated with the object (Salary Employee 1920 and regular employee 1930, see figure 19 for example);


identifying any other object that the object references within a property of an identified property group (mapping person class into employee table, see figure 16 for example);



retrieving data corresponding to each of the properties belonging to the at least one property group (user clicks on the Select Tables item 1120 which displays a listbox to select the Employee table, see column 13 lines 26-28 for example);

storing the retrieved data on a tangible computer storage medium (see column 7 lines 7-9, column 9 lines 2-4 and figure 1 for example); and

representing the object using the retrieved data (representation for accessing objects from a data store, see column 6 line 15 for example).

Applicant has previously submitted arguments refuting this interpretation of Chang. In response, section 3 of the Final Office Action provided the Examiner's Response to Arguments regarding independent claim 1, stating:

In response to applicant's arguments that the prior art does not teach "identifying at least one property group associated with the object which has been chosen to represent the object, at least one property of the object belonging to each property group associated with the object", examiner disagrees. Figure 19 of prior art is described as an illustration of graphical user interfaces (GUI). Looking at the representation of the GUI of figure 19, one can clearly see the name of the "property group" which is "employee"; and an "object which has been chosen to represent the object" which is , for example; a "property of the object" which is "SalaryEmp" for example belonging to the "property group" which is "employee". The representation of a table does not exclude it from being a representation of an object. A table is not excluded from being an object.

Applicant appreciates the Examiner's inclusion of these responses to previously filed arguments. It is unclear however, whether the Examiner considers the table labeled "1910" (and drawn as ) to be the object or the property group chosen to represent the object. In the rejection, the Office Action cites "employee 1910 group" as corresponding to the "at least one property group." In the Examiner's response to arguments, the Examiner appears to consider the name "Employee" as the property group, and table  1910 as the object. Clarification of the Examiner's position is requested. Regardless of which particular interpretation is being relied upon by the Examiner, Chang does not anticipate independent claim 1, as Chang fails to teach multiple steps required in this claim.

Independent claim 1 recites the above-discussed limitation of "identifying at least one property group associated with the object which has been chosen to represent the object, at least one property of the object belonging to each property group associated with the object." This claim limitation is not taught by Chang for several reasons. First, in contrast to the assertion made in the Examiner's response to arguments, there is no teaching in Chang that the name "Employee" is a property group having properties. Instead, "Employee" is a name of the table 1910. See Chang at col. 14, lines 54-55. A name of a table is not a property group.

Second, even if “Employee” represented a property group (there is no teaching in Chang to suggest it does), there is also no teaching that at least one property of the object belongs to such a property group. While the Office Action cites items SalaryEmp 1920 and RegularEmp 1930 from figure 19 of Chang as being properties in the supposed property group “Employee”, Chang does not support such an interpretation. Instead, Chang describes items 1920 and 1930 as being two classes to which the table 1910 is to be mapped. See Chang at col. 14, lines 52-56. Lacking a teaching or suggestion of this first step recited in independent claim 1, claim 1 cannot be anticipated by Chang.

Further, since Chang does not teach property groups as required by independent claim 1, Chang also cannot teach or suggest the steps of “identifying any other object that the object references within a property of an identified property group.” Chang does not support the interpretation set forth in the Office Action that this step is taught in figure 16 of that patent by mapping a person class into an employee table. Additionally, this interpretation is inconsistent with the interpretation applied in the Office Action regarding the claim limitation “identifying at least one property group associated with the object which has been chosen to represent the object, at least one property of the object belonging to each property group associated with the object.” There, the Office Action used the mapping of Employee table 1910 to classes 1920 and 1930 (referring to FIG. 19 of Chang) as representing the required claim limitation of properties associated with a property group. In contrast, the Office Action now cites the mapping of a table 1060 to Person class 1070 in FIG. 16 as representing the required identification of any other object that the object references within a property of an identified property group. It appears to be inconsistent to consider classes to which a table is mapped to be both properties of a property group and objects referenced within a property of an identified property group, and it is thus respectfully maintained that Chang does not teach or suggest the limitation of “identifying any other object that the object references within a property of an identified property group.” Lacking a teaching or suggestion of this claim limitation, Chang cannot anticipate independent claim 1 or dependent claims 2-10.

Additionally, it is respectfully maintained that Chang does not teach the limitations of “retrieving data corresponding to each of the properties belonging to the at least one property group,” and “representing the object by using the retrieved data to generate a user interface,” separately or in combination. Chang does not support the interpretation set forth in the Office Action that the step of retrieving data is taught at col. 13, lines 26-28 of that reference (relating to a user clicking on a Select Tables item in order to display a listbox). For instance, at col. 13, lines 21-32, Chang states:

In this scenario, the user selects an existing table Employee and an existing class Person. Referring back to FIG. 10, the user selects the existing table Employee by clicking on the Schema menu item 1030 from the menu bar 1010. Referring now to FIG. 11, from a subsequently displayed Schema pulldown menu 1110, the user clicks on the Select Tables item 1120 which displays a listbox 1130 listing existing tables from which the user may select. The user may then click on Employee 1140 within the listbox to select the Employee table. This causes the Employee table icon 1060 to be displayed within the Schema Mapper Window 1000 as illustrated in FIG. 12.

Thus, while Chang teaches that icons representing tables can be displayed via such a pulldown menu selection process, it does not teach “retrieving data corresponding to each of the properties belonging to the at least one property group.” Similarly, in the text surrounding col. 6, line 15, which was referenced by the Office Action as teaching “representing the object by using the retrieved data to generate a user interface,” Chang states:

In accordance with another aspect of the present invention, object oriented language independence is provided by the use of the object oriented language independent Schema Mapping Definition Language, the object oriented language independent Schema Mapping Internal Representation, and Code Generators which generate code in various object oriented languages from the Schema Mapping Internal Representation for accessing objects from data stores. These Code Generators may be used to generate access methods based on the Schema Mapping Internal Representation for accessing objects from a data store. To provide such access to a data store, a Code Generator may generate a combination of object oriented programming language and data store access language. The system then generates a make file describing the dependency of files, invokes the proper compilers, links the appropriate run-time libraries, and creates executable code for accessing a data store.

It is respectfully maintained that this is not a teaching of “representing the object by using the retrieved data to generate a user interface” as required by claim 1. Lacking a teaching of these claim limitations from independent claim 1, independent claim 1 and dependent claims 2-10 cannot be anticipated by Chang.

Further, multiple ones of dependent claims 2-10 are believed to contain additional limitations which, in combination with the limitations of independent claim 1, are neither taught nor suggested by Chang. Consequently, it is respectfully requested that the rejection of claims 1-10 be withdrawn.

Referring now to independent claim 11, this claim is directed to a method including the step of “associating property groups with objects in a data base, each property group associated with an object including at least one property of the object” and the further limitation of “for each of a plurality of objects in the database, specifying which property groups are to be used in representing the object.” These limitations are neither taught nor suggested by Chang.

In rejecting this claim, the Final Office Action stated:

Re claim 11, Chang et al. discloses a method of constructing representations of objects each having at least one property, the method comprising: associating property groups with objects in a data base, each property group associated with an object including at least one property of the object; storing the property groups in the database; and for each of a plurality of objects in the database, specifying which property groups are to be used in representing the object (see figure 19 and abstract for example); and for each of the plurality of objects in the database, storing on a tangible computer storage medium the specification of a property groups for use in generating a user interface representing the object (see column 7 lines 7-9 and column 9 lines 2-4 for example).

Applicant has previously submitted arguments refuting this interpretation of Chang. In response, section 3 of the Final Office Action provided the Examiner’s Response to Arguments regarding independent claim 11, stating:

In response to applicant’s arguments regarding claim 11, again Chang teaches of “property group” (“employee” for example) which meets the claim limitations as argued above. Furthermore. Chang teaches of using computer with

the invention, and that data is stored using the database which can also be used with the computer (see rejection above).

Again, Applicant traverses this interpretation applied by the Examiner. As discussed with reference to claim 1, Chang provides no teaching of property groups as used in the context of independent claim 11 and the present application. As such, Chang provides no teaching of the claim limitation of “associating property groups with objects in a data base, each property group associated with an object including at least one property of the object.” Chang also provides no teaching of, for each of a plurality of objects in the database, “specifying which property groups are to be used in representing the object.” Lacking a teaching of these claim limitations from independent claim 11, independent claim 11 and dependent claims 12-21 cannot be anticipated by Chang. Further, multiple ones of dependent claims 12-21 are believed to contain additional limitations which, in combination with the limitations of independent claim 11, are neither taught nor suggested by Chang. Consequently, it is respectfully requested that the rejection of claims 11-21 be withdrawn.

Referring now to independent claim 22, this claim is directed to an object representation system for constructing a representation of an object having at least one property. System claim 22 includes the limitations of “an object definition database storing object definition data which defines properties of the object, and storing at least one property group associated with the object;” and “a processor configured to implement an object representation engine, the engine configured to generate a user interface representation of the object using at least one property group stored in the object definition database.”

In rejecting independent claim 22, the Office Action stated:

Re claim 22, Chang et al. discloses an object representation system for constructing a representation of an object having at least one property, the system comprising: an object database storing data for populating instances of the object; an object definition database storing object definition data which defines properties of the object, and storing at least one property group associated with the object; and a processor (compiles, see column 9 lines 33-35, and using computer, see column 9 lines 2-4 for example) configured to implement an object representation engine, the engine configured to generate a user interface

representation of the object using at least one property group stored in the object definition database (see figures 16, 19 and abstract for example).

Applicant has previously submitted arguments refuting this interpretation of Chang. In response, section 3 of the Final Office Action provided the Examiner's Response to Arguments regarding independent claim 22, stating:

In response to applicant's arguments regarding claim 22, again Chang teaches of "an object definition database storing object definition data which defines properties of the object, and storing at least one property group associated with the object" examiner disagrees. The abstract of Chang teaches of GUI mapping and accessing objects in data stores, further in column 9 lines 1-5 describes accessing database to support the client data store manager and routing information to proper server data store manager in support of the schema of the invention for example. Figure 16 also shows "object definition data which defines properties of the object" such as "firstName, lastName". Furthermore, Chang teaches of using computer, and compiling the invention (see rejection above).

Again, Applicant traverses this interpretation applied by the Examiner. As discussed with reference to claim 1, Chang provides no teaching of property groups as used in the context of independent claim 22 and the present application. As such, Chang provides no teaching of the claim limitation of "an object definition database storing object definition data which defines properties of the object, and storing at least one property group associated with the object." (Emphasis added). Chang also does not teach a "processor configured to implement an object representation engine, the engine configured to generate a user interface representation of the object using at least one property group stored in the object definition database." Lacking a teaching of these claim limitations from independent claim 22, independent claim 22 and dependent claims 23-31 cannot be anticipated by Chang. Further, multiple ones of dependent claims 23-31 are believed to contain additional limitations which, in combination with the limitations of independent claim 22, are neither taught nor suggested by Chang. Consequently, it is respectfully requested that the rejection of claims 22-31 be withdrawn.

Reconsideration and allowance of all pending claims are respectfully requested.

The Director is authorized to charge any fee deficiency required by this paper or credit any overpayment to Deposit Account No. 23-1123.

Respectfully submitted,

WESTMAN, CHAMPLIN & KELLY, P.A.

By: /John D. Veldhuis-Kroeze/
John D. Veldhuis-Kroeze, Reg. No. 38,354
900 Second Avenue South, Suite 1400
Minneapolis, Minnesota 55402-3244
Phone: (612) 334-3222
Fax: (612) 334-3312

JVK/jmt